

# How Animals Communicate



## In a Nutshell



Students learn how and why wildlife use sound, scent, and body language to communicate. Students will discover how biologists use this knowledge of wildlife communication to help identify wildlife species they may not be able to see.

**Grades** 2 & 3  
**Seasons** Winter & Spring  
**Location** **Bloomington Visitor Center & Rapids Lake Education Center**

## Learning Objectives

After this activity, students will be able to:

- List three ways animals communicate: sound, smell, and body language.
- Explain two reasons biologists study animal communication.

## Literature Connections

- ***Slap, Squeak and Scatter: How Animals Communicate*** by Steve Jenkins
- ***Animal Communication*** by Janet McDonnell
- ***Animal Senses: How animals see, hear, taste, smell and feel*** by Pamela Hickman
- ***What's in a Birdsong?*** by Tom Anderson, MN Conservation Volunteer Magazine
- ***Buggy Sounds of Summer*** by Larry Weber, MN Conservation Volunteer Magazine
- ***Secrets of Sound: Studying the Calls and Songs of Whales, Elephants, and Birds*** by April Pulley Sayre.

## Pre-Activities

Students will listen to a variety of recorded animal calls and study pictures illustrating body language. Based on observations, students will discuss the many ways animals communicate and the types of messages they are sending.

## On-site Activities

**Scent Trail:** Following a scent trail, students will gather clues at scent stations to help them identify the mystery animal.

OR



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**Sound Mapping:** Students “map out” **spring** sounds they hear on the refuge by quietly listening and recording animal sounds and the location of each sound they hear. When the “sound maps” are complete, students make comparisons between their own sampling area and those from different habitats on the refuge.

### Classroom Connection

Students can observe and listen for the animals in their community. Encourage students to record their observations and discoveries. How are animals using sound, scent, and body language to communicate? Compare and contrast the observations during different times of the day, different seasons, and different weather conditions.

### Teacher Resources

- ***A Guide to Wildlife Sounds*** by Lang Elliott
- ***What's in a Birdsong?*** by Tom Anderson, MN Conservation Volunteer Magazine
  - Teacher's Guide  
[http://www.dnr.state.mn.us/young\\_naturalists/teachersguides](http://www.dnr.state.mn.us/young_naturalists/teachersguides)
- ***Buggy Sounds of Summer*** by Larry Weber, MN Conservation Volunteer Magazine
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## How Animals Communicate

### Pre-Activities

#### Materials

- Birdsong & Frog call Identifier (**NOT** in bin, get from classroom cupboard)
- Reptiles & Amphibians of MN Field Guide CD and book
- CD player
- Frogs and Toads of MN laminated call description sheets
- How Animals Communicate PowerPoint on flash drive
- Hard copy of How Animals Communicate PowerPoint
- Squirrel, Beaver, and Great Horned Owl puppets (**NOT** in bin, get from curriculum closet)
- Deer skull
- Frog chorus kit (combs, rubber bands, sleigh bells)

#### Introduction (PP slide 1)

Animals communicate with each other in many ways. Some methods are obvious, while others are subtle. Animal communication is generally not well understood by people. People often think animals use only sound to locate other members of their species. Surprisingly, animals use many techniques to send a wide variety of messages to communicate with other animals. ***\*During the class you can choose to use the puppets you bring. They can be held up while talking about that specific animal and you can use them to help demonstrate/illustrate the behavior.\****

The picture on the title slide is of a male elk bugling. They'll do this as a way of attracting mates.

#### **What are the 3 main ways animals communicate? (PP slide 2)**

- Sound
- Body language
- Smell

#### Sound (PP slide 3)

- Why use sound?
  - Locate others across distances
  - Find family
  - Send warnings
- Why do animals sound different from each other?
  - To recognize same species
  - Find a mate
  - Differentiate family members
- How can making sound be dangerous?
  - This is a discussion question. See if students can come up with things like: *alerting predators, making it easier to locate prey*

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Some mothers and their young can locate each other in a herd by calling because to them they sound different than the other herd members. Ask students why they think birds and frogs “sing” so much? What’s the main reason for calling out? *To find a mate!* Try to prompt students into saying that making those specific calls is the fastest way for potential mates to find each other. That’s why every species sounds different. Even individuals of a species sounds different. This is why spring is a “noisy” season. Birds returning from migration and frogs waking up from their winter hibernation are busy locating mates.

### **MN Frogs & Toads (PP slide 4)**

- Hand out laminated frogs and toads of MN sheets.
- Have students listen to specific frog/toad calls using the CD and player.
- Tell students to look at their sheet while listening to see if they can figure out which one is making that call.

Frog call CD tracks (you can play them in order or mix it up)

- Spring Peeper track 60
- Bull Frog track 61
- American Toad track 62
- Chorus Frog track 64
- Leopard Frog track 65
- Gray Tree Frog track 66
- Green Frog track 70
- Wood Frog track 71

Frog Fun Facts

- The gray tree frog can be found in two different color phases: gray and green. Even though it has different colors, the patterns on the gray tree frog remain the same. This frog has a blotchy “X” pattern across its back and lines on the legs that can be seen when its legs are folded. There’s yellow/orange color on the inside of the gray tree frog’s thighs, this is a main ID feature for the species.
- Wood frogs can also change color. Many times you see them as a tan color with a dark mask over the eye. Wood frogs can change to a darker brown color. This is a way to camouflage depending on where the frog is sitting.

### **MN Birds (PP slide 5)**

- Use the Identifier to play the bird calls for the examples on the slide.
- Play the hawk call and ask the students who they think makes that sound. In movies and on TV, many bald eagles are shown with the sound of an intimidating scream. That’s actually the sound of a red-tailed hawk, so many people think that’s what the eagle actually sounds like. See if the students know the difference.
- Ask students if any of the calls sound familiar and where they think they heard them.
- Talk about how each bird has multiple different calls and songs. Ask students why a bird would make so many different sounds.

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### Bird Fun Facts

- The white-breasted nuthatch sits on the sides of trees with its head towards the ground and tail pointed up the tree. So it looks like it is upside-down. Instead of moving up the tree like other woodpeckers, the nuthatch spirals down the tree, an easy way to spot the nuthatch from a distance. Nuthatches are the only native Minnesota bird that does this.
- Black-capped chickadees are known for their call “chicka-dee-dee-dee.” With this call, the number of “dee’s” at the end signal different danger levels. So if a chickadee sees something threatening it will add extra “dee’s” on the end of its call. The more dangerous it is, the more “dee’s” in the call.

### **Body Language (PP slide 6)**

- How can animals show this?
  - The way it stands
  - Tail posture
  - Fluffing feathers or fur
  - Ear movement
  - Showing teeth

### **Animals using body language (PP slide 7)**

Go through the pictures and ask students what they think each animal is trying to communicate.

- Turkeys strut all puffed up to show off for mates and look more intimidating to other males as a way of competing.
- The owl is in a possible defensive position communicating that it might feel threatened/uncomfortable and is trying to look big. Use the owl puppet to point out its ear tufts. These are not actually ears, just feathers. They can make the owl look more intimidating.
- The horse looks like it could be interested in something and is paying attention to what’s going on.
- The skunk is putting off a warning of “don’t come near me.”
- The rattle snake is in a defensive strike pose because it feels threatened and is rattling its tail as a warning.
- The wolves have a few things we can interpret. The scene they present looks like they’re friendly with each other, showing affection, and maybe a little playful.

### **Smell (PP slide 8)**

Scent marking is another tool of animal communication. Many animals define or “mark” their territory by leaving a scent around the habitat where they hunt, live, and raise their young. This “scent fence” is a warning to other animals to STAY OUT of another animal’s territory to avoid confrontation. These scent trails also help predators find prey.

### **How do animals leave their scent behind? (PP slide 8)**

- Urine
- Scat
- Oils from glands

### **Animals leaving scent examples (PP slide 9)**

- The beaver has a scent gland, the castor gland, located under the base of the tail. The beaver will rub the gland against small mounds of mud it makes along the shoreline. *Use the beaver puppet to show where the gland would be located.*
- White-tailed deer have scent glands on their heads, on all four feet and on the inside of their legs. They rub their scent on tree branches and trunks to mark their territory. *Use the deer skull to illustrate where the glands would be (between the antlers). Hold up the deer leg to point out the area where the glands would be on the inside of the ankle.*
- Fox, and many canids, urinate on foliage, like in the picture, to mark it. Other animals can smell it and identify it as fox urine, some can smell the difference between individual foxes. *How might different animals react to the fox urine? Like a rabbit, coyote, or deer?*
- Scat sends the message to other animals of who is in the area. On the slide is coyote scat, which can be found on trails when hiking. *Ask students if they think animals can purposely leave scat in places or if it’s just random.*

### **Wrap- Up (PP slide 10)**

Explain to students during their fieldtrip to the refuge, they will test their sense of smell and follow a scent trail to discover facts about an animal, or test their hearing by listening for sounds and mapping where they are coming from. Remind students to dress for the weather and outside exploration.

### **Optional Activity: Create a Frog Chorus**

**Materials:** Frog chorus kit (combs, rubber bands, sleigh bells), Frogs of MN Poster

Divide the class into 4 groups. Pass out one item from the frog chorus kit to 3 of the 4 student groups. Explain to the 4<sup>th</sup> group they have their own built in frog calling “tool” and will be shown how to use it. As each team receives their chorus kit item, demonstrate how to “play” the item (as described below) explaining which frog the call imitates.

**Team 1: Green Frog (rubber band)** – Stretch the rubber band between the thumb and second finger. Pluck one side of the stretched rubber band to create a sound that imitates the “plunk” of a Green Frog. Instruct the team to “call” (play their rubber bands) in unison.

**Team 2: Chorus Frog (comb)** – Run a fingernail down the edge of a comb to imitate the “raking” call of a Chorus Frog. Instruct the team to “call” (play their combs) in unison.

**Team 3: Spring Peepers (sleigh bells)** – Shake the sleigh bells to imitate the “jingling” call of the Spring Peeper frog. Instruct the team to “call” (play their bells) in unison. Another option for this is to have students just say “Pee-per”, “Pee-per”, “Pee-per” on repeat!

**Team 4: American Toad** – To imitate the “trill” of the American Toad touch the tip of your tongue to the roof of your mouth. Instruct the team to “call” in unison.

When each team has mastered their “tool”, instruct students to “call” in unison like a frog chorus.

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### On-site Activities

#### **Materials**

- Wildlife pictures of animals “communicating” (wolves, turkey, birds, frogs, etc.)
- Squirrel, Beaver, and Great Horned Owl puppets
- Pictures of the mystery animals

#### **Scent Trail Activity**

- 30 Mystery Animal Clue Cards with scented canisters attached
- Refuge maps showing placement of numbered clue cards
- Scent canisters— one scent per team (cologne, vinegar, peppermint, licorice, lemon, cinnamon)
- Mystery Animal Clue Sheets
- Group Leader Guidelines

#### **Sound Mapping Activity**

- Blank Paper- 1 per student
- Clipboards- 1 per student
- Pencils- 1 per student
- Sound map example

#### **Introduction**

(10 min)

Review with students the various ways animals communicate as discussed in the pre-activity. To refresh the students’ memory, display the assortment of wildlife pictures that were used in the pre-activity.

**Sound:** Perhaps the most important reason for animals to sound different from each other is that it makes it easier to quickly find the opposite sex. However, making noise is dangerous! Sound can alert predators.

**Body Language:** Animals also communicate with body language. How an animal stands, raises a tail, fluffs feathers or fur, or shows teeth can inform another animal how it is feeling.

**Smell:** Dogs, foxes, wolves, coyotes, raccoons, beavers, and many other types of animals define or “mark” their territory by leaving a smell around the habitat where they hunt, live, and raise their young. This “scent fence” is a warning to other animals to STAY OUT of their territory. These scent trails also help predators find prey. Animals mark their territory with urine, scat, and/or oils from special scent glands on their body.

#### **TEACHERS PLEASE NOTE**

Staff may have to adjust/exchange scents depending on availability or effectiveness. Please check with refuge staff at the start of your fieldtrip to confirm the scents being used.

**THANKS!**



### **Activity Option 1: Scent Trail**

(50 min)

Set up instructions are listed on a separate page.

#### **Collecting Clues**

Divide students into five teams with an adult leader for each team. Explain to the class that they will be testing their ability to follow their own, unique “scent trail”. Provide each team with a scent canister and explain that this scent belongs to their team. Provide students a few minutes to try to identify the smell. Students should not open the containers to determine the smell. They will be able to smell their scent through the holes on the bottom of the container.

Let each team guess their scent. Write the name for each scent on the board next to the team number (Team 1: cologne, Team 2: licorice, Team 3: peppermint, Team 4: lemon, Team 5: cinnamon, *optional extra if needed Team 6: vinegar*). Each team ***must remember their scent*** for this activity as they will not be allowed to take their scent canisters on the scent trail.

Pass out one clipboard, marker, map and Mystery Animal Clue sheet per team. Explain that the scent canisters are hanging along the Hillside Trail (Set 1) and in the Prairie (Set 2). Students collect clues by smelling **EACH** canister at **EACH** scent station. To determine the identity of their Mystery Animal, each team must visit all scent canisters to collect the clues to their animal’s identity.

If the canister scent matches their team scent, students should circle the corresponding number on their clue sheet. Use the demo card and canister to point out the location of the clue number. Emphasize to check **EVERY** card and scent canister at **EACH** scent station for the following reasons.

**\*\* THERE MAY OR MAY NOT BE A CLUE FOR EVERY TEAM AT EACH SCENT STATION**

**\*\* THERE MAY BE MORE THAN ONE CLUE FOR A TEAM AT A SCENT STATION.**

After stopping at each scent station, each team should return to the Visitor Center with five clues circled, one answer under each of the five categories:

- **What My Animal Eats**
- **What My Animal Looks Like**
- **Where My Animal Lives**
- **My Animal’s Babies**
- **A Special Fact About My Animal**

To avoid congestion at the scent stations, start teams at different scent stations or directions along the trail. Instruct the teams to meet back at the Visitor Center

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when they have located all five clues. Provide each adult leader with the Mystery Animal Clue Key to use **ONLY** if the team is having a high level of difficulty distinguishing scents.

Encourage students to keep a list of the sounds they hear as they travel between scent stations. If students can not identify the animal making the sound encourage them to describe the sound. Example: Does it sound like “chatter”, a “buzz” or a “hum”? Are there many animals making the sound together or is it coming from a single individual? Look to where the sound is coming from. Can they spot the animal making the noise? If they can, how is the animal behaving? What is it saying with its body language?

### **Wrap-Up – Option 1 Scent Trail**

Back inside the classroom, ask each team to read off the numbers of the clues they collected, reading each clue aloud. Use the answer key to correct teams as needed. Ask the team to guess the identity of their “mystery” animal. Ask the rest of the class if they agree. Then repeat this process with the next team. Each student should fill out their journal page according to their mystery animal.

**Optional Additional Wrap-up – Territories:** Pass out a laminated copy of the map showing where the numbered clue cards were placed. Ask students to map out the territory of their animal by connecting the clue numbers, starting with their lowest clue number and moving in order to highest. Show an example on the board.

Use the animal territories map/poster to compare the placement and size of the Mystery Animal’s territories. Lead the class in a discussion of the following questions.

- Which animals had the largest territories? (deer, fox)
- Which animals had the smallest territories? (squirrel, beaver)
- Which animals stayed near water? (beaver, raccoon)
- Which preferred being in the woodlands? (fox, squirrel)
- Did any of the territories overlap? (all of them)
- Was the territory of a prey animal (squirrel) within the territory of a predator (fox)?

If time allows make a list of the sounds (and the sound descriptions) students heard as they collected their clues. Have the entire class try to identify the animals that made these sounds.

### **Activity Option 2: Sound Mapping**

**(30 min)**

Spring is a noisy time of year! Animals use sounds to locate mates and to set up and defend territories. This activity will allow students to “map out” **spring** sounds occurring on the refuge.

If the class brought enough volunteers, divide the class into groups and assign each group to a different location along the trail. For example, one group might be assigned to sit in a different habitat. If this is not possible, clearly identify boundaries within an area of the trail so students can easily be seen during the activity.

Provide each student with a blank sheet of unlined paper, a clipboard, and a pencil. Ask the students to start by marking an “X” in the center of the paper. The “X” will represent the student’s location on the sound map. Ask students to spread apart within the designated boundaries. Advise students in order for this activity to work, **there must be no talking**. Provide students at least 5 minutes (more if group can tolerate it) to sit quietly, listen and record the sounds they hear.

As students sit quietly, have them mark the location of any sounds they hear (in relationship to the “X”). Instruct students to mark all natural sounds with a large dot and man-made sounds with a star or asterisk. If they can identify the sound they can draw a very simple picture or write the name of the sound next to the shape. Show an example. *It is not necessary for students to identify all the sounds they hear.* Remember, the emphasis is placed on listening; not creating fabulous works of art. Students may continue drawing back in the classroom or at school. Students should record as many sounds as possible on their map during the time allowed.

### **Wrap-up – Sound Mapping**

**(20 min)**

When students have completed mapping the sounds, gather the group together in the classroom to analyze the data.

#### **Compare Maps within One Habitat**

Ask students from each habitat to answer the questions below. Record the answers on the board.

1. What types of sounds did you hear?
2. Were all the sounds natural?
3. How could you tell the direction a sound came from?
4. How could you tell which sounds were closer & which were farther away?

#### **Compare Maps from Different Habitats**

5. Which habitat was the noisiest?
6. Which habitat had the most variety of sounds?
7. Which habitat had a lot of sound with most coming from one type of animal?

If enough time remains, take students on a hike through another part of the refuge to observe animal body language and listen for animal sounds.

**Wrap-up Management Connection**

**Identifying and Understanding Wildlife Communities**

Biologists study how animals communicate for several reasons. Often, animals are hard to see within a habitat but they can be heard. Being able to identify animals by their calls helps biologists during population and habitat studies.

Understanding animal “body language” helps biologists interpret interactions between individuals within a population or those between predators and prey. This helps us know more about the daily lives and life cycles of animals.

Biologist can also use the scent marking behavior as a way to attract wildlife into a type of “track trap” called a Scent Post Survey. This type of “trap” is especially useful in finding out what nocturnal animals are on the refuge. To build a Scent Post Survey, a circle of soft sand (about the size of a hula hoop) is carefully spread near a wildlife trail. A rock or post is set in the middle. A scent tablet is left at the base of the post. The scent tablet, which is VERY SMELLY attracts a variety of mammals, many of whom are predators looking for prey. These animals catch the scent from the post or rock and step into the sand to take a sniff. The next morning, biologists look at the tracks left behind in the sand to determine what animals are in the area.

**Activity Option 1: Scent Trail**  
**Mystery Animal Clue Collection**

Find 5 clue cards that match the scent of your mystery animal. Circle one answer for each clue card you find along the trail. Read all your clues to guess the identity of your mystery animal.

**What My Animal Eats**

1. Buds, leaves, berries, even bark!
2. Small fish, crayfish, frogs, mice, eggs, fruits and nuts
3. Mice, baby rabbits, insects, small birds, and carrion
4. Nuts and fruit, sometimes eggs and insects too
5. The bark off of aspen and willow trees
6. Small animals like mice, voles and birds, berries and insects

**What My Animal Looks Like**

7. Is large with long legs and gray or tan fur
8. Has a black face mask and a ringed tail
9. Has a long fuzzy tail and gray fur
10. Is small with long narrow body, short legs and a long tail
11. Has thick, shiny fur, webbed toes and a large, flat, hairless tail
12. Has beautiful reddish fur and a long tail

**Where My Animal Lives**

13. In woodlands, prairies, wetlands and even neighborhoods
14. Wherever there are large trees
15. In grasslands, forests, and brush piles
16. Woodlands near streams, ponds, and lakes
17. In ponds and rivers
18. In forests and along edges of fields

**My Animal's Babies**

19. The young are covered in white spots to help them hide from predators
20. May have as many as 9 brothers and sisters at once
21. They develop quickly and are able to hunt by 8 weeks old
22. Follow mom wherever she goes until they are all grown up
23. Have to learn how to swim from their parents
24. Are born underground in a burrow or den

**A Special Fact About My Animal**

25. This animal builds large leafy nests high up in trees
26. This animal is brown with a white belly in summer and changes to all white in the winter
27. This animal grows antlers in the spring and sheds them in the winter
28. This animal seems to wash its food in the water before eating it
29. This animal dams up fast moving water to create calm pools of water near their den
30. Their bark can sound like the bark of a small dog

## Mystery Animal Clue Collection (Answer Key)

### Team 1: White-tailed Deer (Scent: Cologne)

Territory Outline: 1, 7, 13, 19, 27

- **What My Animal Eats:** Buds, leaves, berries, even bark!
- **What My Animal Looks Like:** Is large with long legs and gray or tan fur
- **Where My Animal Lives:** In woodlands, prairies, wetlands and even neighborhoods
- **My Animal's Babies:** The young are covered in white spots to help them hide from predators
- **A Special Fact About My Animal:** This animal grows antlers in the spring and sheds them in the winter

### Team 2: Raccoon (Scent: Licorice)

Territory Outline: 2, 8, 16, 22, 28

- **What My Animal Eats:** Small fish, crayfish, frogs, mice, eggs, fruits and nuts
- **What My Animal Looks Like:** Has a black face mask and a ringed tail
- **Where My Animal Lives:** Woodlands near streams, pond, and lakes
- **My Animal's Babies:** Follow mom wherever she goes until they are all grown
- **A Special Fact About My Animal:** This animal seems to wash its food in the water before eating it

### Team 3: Gray Squirrel (Scent: Peppermint)

Territory Outline: 4, 9, 14, 20, 25

- **What My Animal Eats:** Nuts and fruit, sometimes eggs and insects too
- **What My Animal Looks Like:** Has a long fuzzy tail and gray fur
- **Where My Animal Lives:** Wherever there are large trees
- **My Animal's Babies:** May have as many as 9 brothers and sisters at once
- **A Special Fact About My Animal:** This animal builds large leafy nests high up in trees

### Team 4: Weasel (Scent: Lemon)

Territory Outline: 3, 10, 15, 21, 26

- **What My Animal Eats:** Mice, baby rabbits, insects, small birds, and carrion
- **What My Animal Looks Like:** Is small with long narrow body, short legs and a long tail
- **Where My Animal Lives:** In grasslands, forests, and brush piles
- **My Animal's Babies:** They develop quickly and are able to hunt by 8 weeks old
- **A Special Fact About My Animal:** This animal is brown with a white belly in summer and changes to all white in the winter

### Team 5: Beaver (Scent: Cinnamon)

Territory Outline: 5, 11, 17, 23, 29

- **What My Animal Eats:** The bark off of aspen and willow trees
- **What My Animal Looks Like:** Has thick, shiny fur, webbed toes and a large, flat, hairless tail
- **Where My Animal Lives:** In ponds and rivers

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- **My Animal's Babies:** Have to learn how to swim from their parents
- **A Special Fact About My Animal:** This animal dams up fast moving water to create calm pools of water near their den

### **Team 6: Red Fox** (Scent: Vinegar)

Territory Outline: 6, 12, 18, 24, 30

- **What My Animal Eats:** Small animals like mice, voles and birds, berries and insects
- **What My Animal Looks Like:** Has beautiful reddish fur and a long tail
- **Where My Animal Lives:** Forests and along edges of fields
- **My Animal's Babies:** Are born underground in a burrow or den
- **A Special Fact About My Animal:** Their bark can sound like the bark of a small dog

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## **How Animals Communicate Inclement Weather Alternatives**

### **Scent Trail Inside Option**

Set-up as many of the scent stations as room will allow inside the Visitor Center. Proceed with the original activity as described. Complete the fieldtrip time with either of the other rainy day hike alternatives described below.

### **Bird Body Language Observation**

Split the students into groups and have them observe the birds at all the feeder stations. Pass out clipboards, blank paper, and pencils to each student to record observations.

### **Compare Observations within One Feeder Station**

Have the students from each feeder station answer the questions below. Record their answers on the board.

1. What types of body language did the birds display?
2. What did you think their body language was saying?
3. Did birds of the same species display similar body language?

### **Compare Observations from Different Feeder Stations**

4. Which station was the busiest?
5. Which station had the most variety of birds?
6. Which station had the most number of the same species?

### **Wildlife Sounds Bingo**

Pass out one Wildlife Sound Bingo sheet to each student and a handful of bingo chips to each table. Set-up the Wildlife Sounds Power Point and proceed through each slide quizzing students on the variety of wildlife sounds presented (owl, cricket, wolf, chickadee, etc...). Play until the first student covers 4 squares in a row and calls out "BINGO". If time remains continue until the first student covers all 20 squares and calls out "BLACK OUT".

### **Animal Yoga**

Read through the yoga story, and have students do corresponding (highlighted) animal poses as the story progresses along the refuge. Pictures of poses are available in the accompanying "Yoga Poses" Publisher document, and the laminated copy included in the curriculum bin.

### **Yoga Story**

*Setting- MNVNR, all habitats; prairie, wetlands, and forest*

*REMINDER before we start: Just do what you can/ what you're comfortable with and capable of. Just do your best and have fun! If you feel like you can't do something, try it another way or take a break until the next one.*



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Okay- take a deep breath and close your eyes. Let's imagine we're outside right now. It's winter on the refuge, the sun is peeking through the clouds a little bit, there's a layer of snow on the ground, and it's COLD outside. It's morning and almost everyone who lives on the refuge is starting to get ready for the day. If we observe carefully, maybe we'll see some of them!

Right now we're on the edge of the prairie, by some tall trees at the edge of the forest. A **cooper's hawk** swoops down and lands silently on a branch. [*Pose directions*]. He stays perched silently, as still as he can. He looks like he's getting ready for breakfast. If he's quiet, he can swoop down quickly and sneak up on someone who didn't even notice him. [*Hold pose*].

The other birds seem to take notice. A **cardinal** sounds an alarm to the other birds, and then freezes motionless on a branch. [*Pose directions*]. Some of his neighbors answer his call with a call of their own. Now it's quiet again, and almost everyone is frozen and cautious. [*Hold pose*]. If you look carefully, you can also see a **woodpecker** hiding in some branches, and all of the chickadees have stopped moving at the moment. The woodpecker tries to take a peek and see if it's safe yet. [*Pose directions*]. He gives another alarm call.

In the prairie, a **shrew** also hears the commotion. Before she leaves, she pauses for a second at the mouth of her burrow to make sure that it's safe. [*Pose directions*]. After a few minutes, she decides that it's okay, and she leaves in search of food. The sun is getting a little higher in the sky.

On the edge of the prairie, moving back into the woods and not really paying any attention to all of the noise nearby is a **white-tailed deer**. He is a young buck, and he's way more concerned about the scent of the other male deer that he's picking up on some of the nearby trees while he munches on twigs and buds. Then, all of the sudden, he smells something else that startles him a little, and when he hears a sound not too far off from where he's eating, he lifts his tail and bolts away into the woods. [*Pose directions*]. What, or who, did the deer smell that made him so nervous? Last night a **coyote** was in the area, hunting for food and scent marking his territory so that other coyotes moving through the area would know that it was already claimed. [*Pose directions*].

Further in the woods, a **porcupine** is busy eating some tree bark when the deer runs right past him. In alarm, the porcupine, without warning, lifts his quills and begins to crouch into his defensive pose. [*Pose directions*]. He wants everyone else who comes by to know that he's ready to defend himself if he needs to. A few minutes later, it's quiet again and he puts his quills back down and keeps eating. As he moves to the next tree, he gets a whiff of the **skunk** in her underground den. He's glad that it's so cold outside, because if it wasn't, he might be trying to avoid getting sprayed right now. [*Pose directions*]. Since it's so cold and he's mostly nocturnal, he decides to go back to his own den and wait until later to come back out.

### Minnesota Valley National Wildlife Refuge

Not far away, part of the wetland is busy and active in the winter sun, which has gotten a little higher up in the sky by now. Some **beavers** have ventured out of their lodge for a little while, hoping to find some food under the ice before going back to the lodge to hide away for the rest of the day. One beaver has come up through a small hole in the ice to take a break from searching when he thinks that he sees a cooper's hawk circling in the sky above. He slaps his tail on the small area of open water to warn his friends nearby. [*Pose directions*]. He slips back under the ice and heads home to his lodge. On the shore, not very far away from the lodge, is a hibernating **leopard frog**, lying just above the mud in some shallow water. He's very cold now, but in his slumber he's dreaming of warmer spring and summer days when he'll balloon himself up in order to make a loud call that will attract a mate/ FRIEND. [*Pose directions*].

After a long day of adventuring around the refuge, we're all ready to go home, too. Let's sit down and take one last deep breath. Think about how all of the animals on our refuge communicated with each other today. How did they use scent? Sound? Body language?

*Optional last pose(s): Make your own pose and sound while imagining you are an animal at Minnesota Valley. What would you look like if you were defending yourself/ displaying an aggressive pose/ looking for a mate/ etc.?*